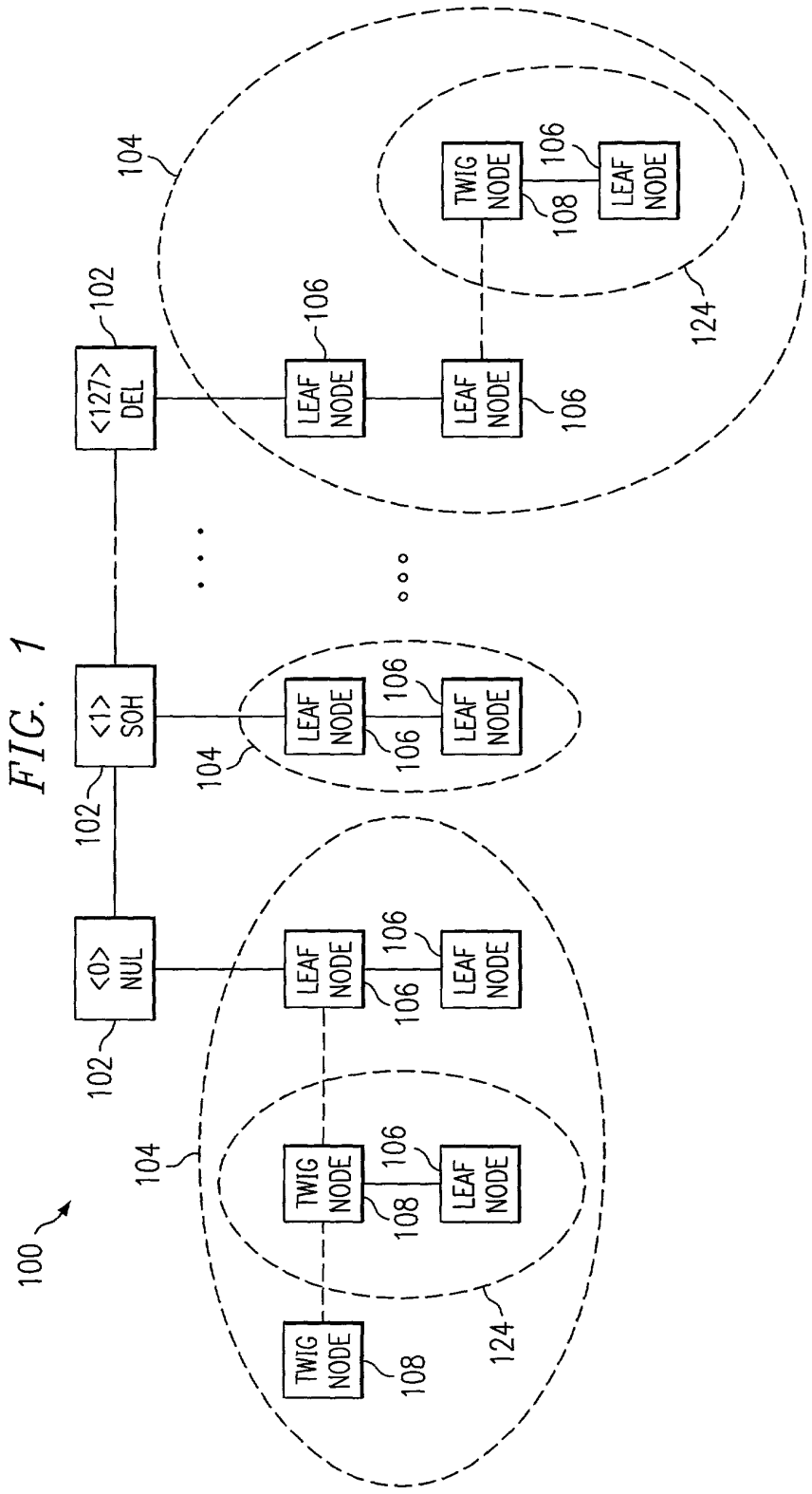


FIG. 1

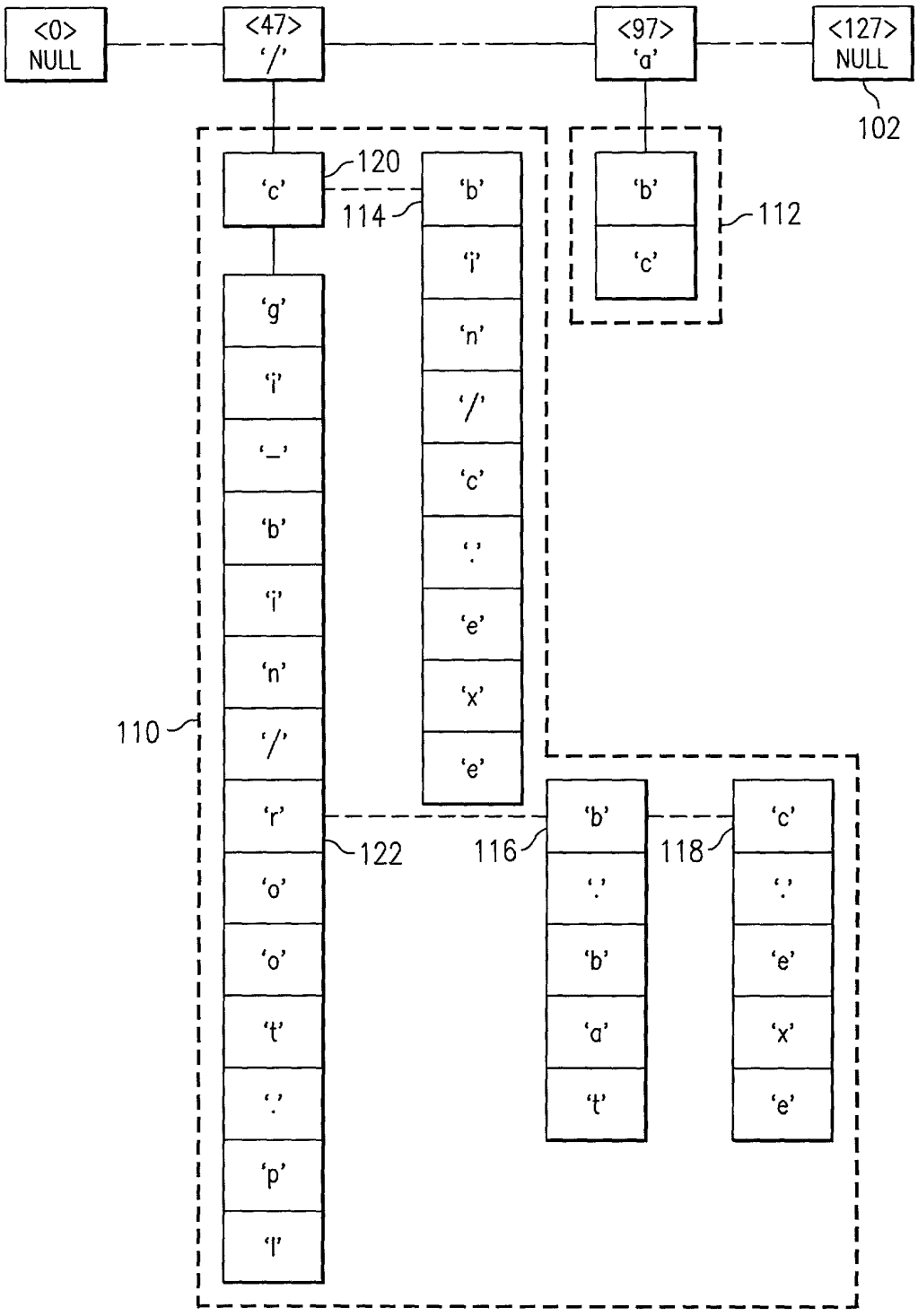

<0>
NULL
<47>
'/'
<97>
'a'
<127>
NULL
102
'c'
120
'b'
114
'i'
'n'
'/'
'c'
'.'
'e'
'x'
'e'
'g'
'i'
'_'
'b'
'i'
'n'
'/'
'r'
'o'
'o'
't'
'.'
'p'
'l'
110
122
'b'
'c'
116
118
'.'
'.'
'b'
'e'
'a'
'x'
't'
'e'
'b'
'c'
112

FIG. 2

FIG. 3A

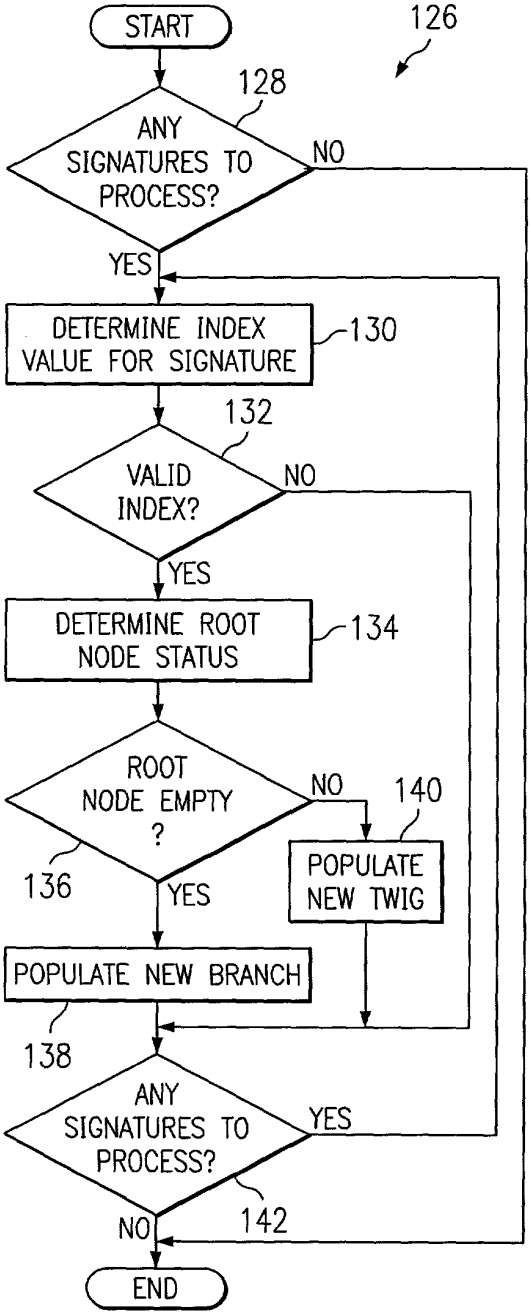
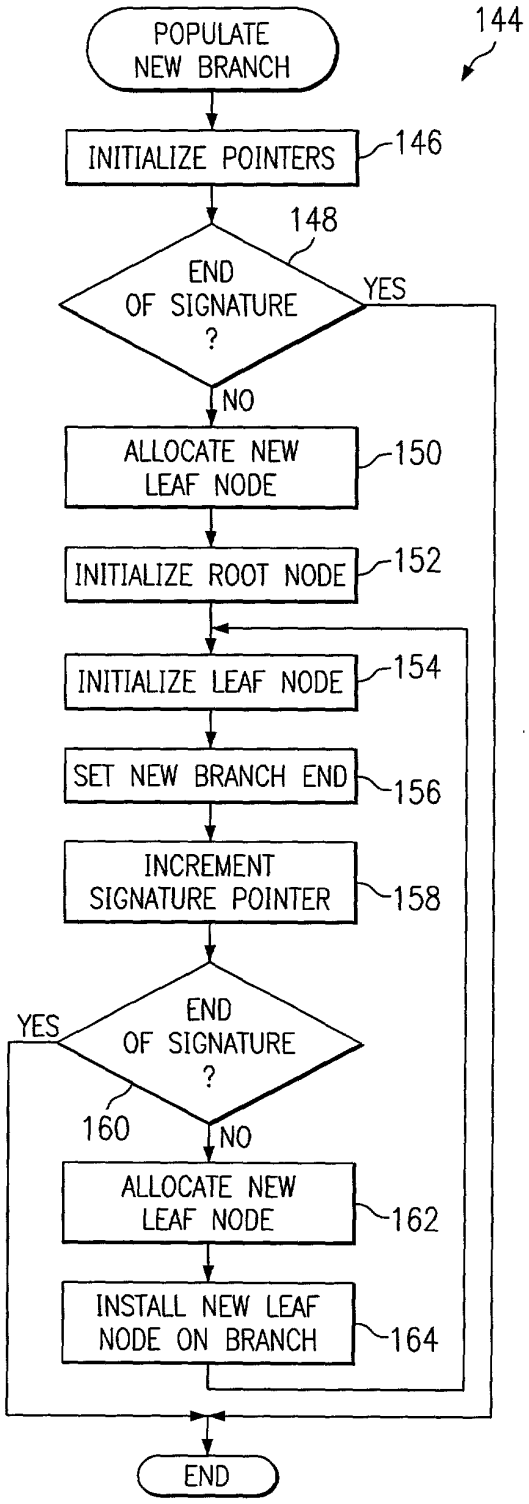
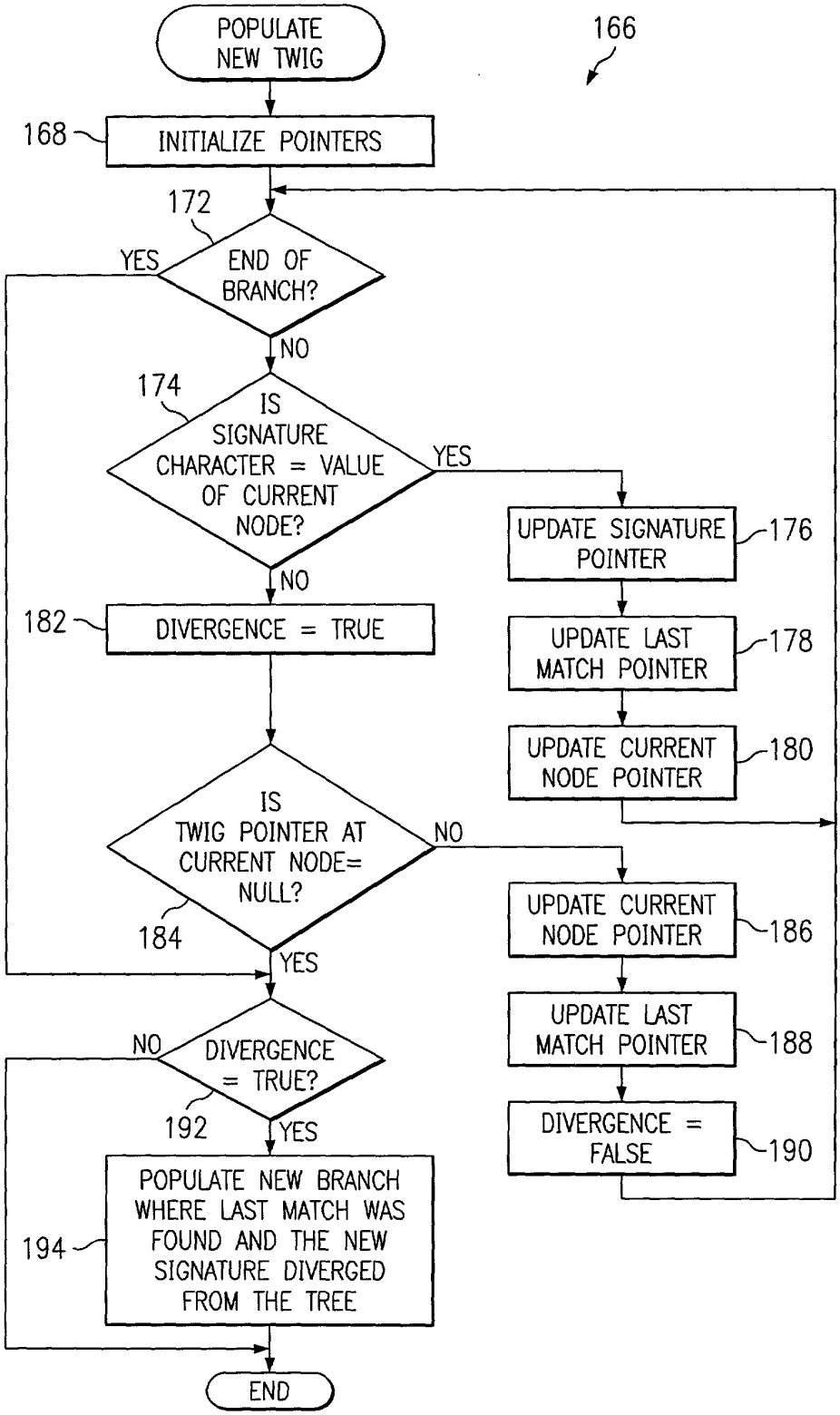


FIG. 3B



Patent Pending

FIG. 3C


166
POPULATE NEW TWIG
168
INITIALIZE POINTERS
172
END OF BRANCH?
YES
NO
174
IS SIGNATURE CHARACTER = VALUE OF CURRENT NODE?
YES
NO
UPDATE SIGNATURE POINTER
176
UPDATE LAST MATCH POINTER
178
UPDATE CURRENT NODE POINTER
180
182
DIVERGENCE = TRUE
IS TWIG POINTER AT CURRENT NODE= NULL?
184
NO
YES
UPDATE CURRENT NODE POINTER
186
UPDATE LAST MATCH POINTER
188
DIVERGENCE = FALSE
190
DIVERGENCE = TRUE?
NO
192
YES
194
POPULATE NEW BRANCH WHERE LAST MATCH WAS FOUND AND THE NEW SIGNATURE DIVERGED FROM THE TREE
END

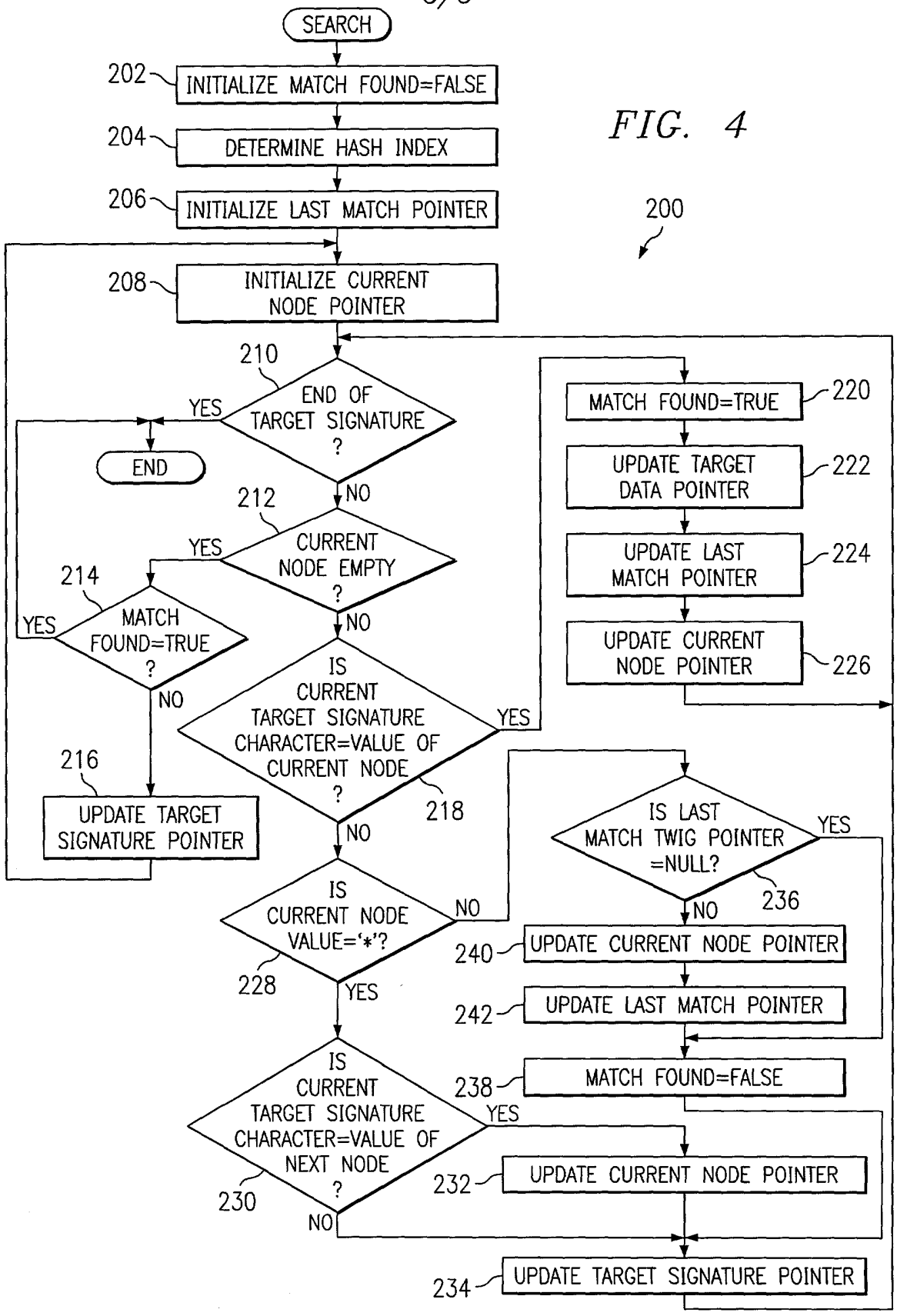

SEARCH
202
INITIALIZE MATCH FOUND=FALSE
204
DETERMINE HASH INDEX
206
INITIALIZE LAST MATCH POINTER
208
INITIALIZE CURRENT NODE POINTER
210
END OF TARGET SIGNATURE ?
YES
END
NO
212
CURRENT NODE EMPTY ?
YES
214
MATCH FOUND=TRUE ?
YES
NO
NO
IS CURRENT TARGET SIGNATURE CHARACTER=VALUE OF CURRENT NODE ?
YES
218
216
UPDATE TARGET SIGNATURE POINTER
NO
IS CURRENT NODE VALUE='*'?
NO
228
YES
IS CURRENT TARGET SIGNATURE CHARACTER=VALUE OF NEXT NODE ?
230
NO
YES
232
UPDATE CURRENT NODE POINTER
234
UPDATE TARGET SIGNATURE POINTER
MATCH FOUND=TRUE
220
UPDATE TARGET DATA POINTER
222
UPDATE LAST MATCH POINTER
224
UPDATE CURRENT NODE POINTER
226
IS LAST MATCH TWIG POINTER =NULL?
YES
NO
236
240
UPDATE CURRENT NODE POINTER
242
UPDATE LAST MATCH POINTER
238
MATCH FOUND=FALSE
200

FIG. 4